Docket No.: 3372-0108P
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Anders LINDBERG

Application No.: 09/960,351 Confirmation No.: 6239

Filed: September 24, 2001 Art Unit: 2424

For: METHOD OF RECEIVING INFORMATION Examiner: A. Q. Shang

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

As required under § 41.37(a), this brief is filed within one month from the mailing of the Notice of Panel Decision from Pre-Appeal Brief Review on November 10, 2009, or with two months from the filing of Notice of Appeal on September 17, 2009, whichever is greater, and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

I.	Real Party In Interest
II	Related Appeals and Interferences
III.	Status of Claims
IV.	Status of Amendments
V.	Summary of Claimed Subject Matter

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

TB INVENT AB

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 37 claims pending in application.

B. Current Status of Claims

1. Claims canceled: None
2. Claims withdrawn from consideration but not canceled: None
3. Claims pending: 1-37
4. Claims allowed: None
5. Claims rejected: 1-37

C. Claims On Appeal

The claims on appeal are claims 1-37

IV. STATUS OF AMENDMENTS

Applicant did not file an Amendment After Final Rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 defines a method of test receiving alternative reception frequencies in a receiver receiving a continuous flow of information of a unidirectional digital broadcasting transmission at a first reception frequency, the continuous flow of information including specific user terminating information transmitted in clusters, the receiver including an information transfer routine that extracts a flow of specific user terminating information from the received continuous flow of information. The method includes, *inter alia*, predicting an interruption in the form of a natural break in the transmitted flow of specific user terminating information, based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster of specific user terminating information is part of the specific user terminating information (Specification p. 11 line 20 to p. 12, line 2; p. 17, line 23 to p. 18, line 24; and Fig. 3); evaluating the interruption to determine whether it will be of an adequate length of time, and generating a positive response if it is evaluated that the interruption will be of an adequate length of time (Specification p. 17, line 23 to p. 18, line 24; and Fig. 3); changing the reception frequency of the receiver from the first reception frequency to an alternative reception frequency if the evaluation has generated a positive response (Specification p. 18, line 25 to p. 19, line 1; and Fig. 3); test receiving the alternative reception frequency (Specification p. 19, lines 1-14; and Fig. 3); and enabling reception and extraction of the flow of specific user terminating information (Specification p. 6, lines 14-19 and Fig. 3).

Independent claim 30 defines a receiver configured to receive a continuous flow of information of a unidirectional digital broadcasting transmission at a first reception frequency, the continuous flow of information including specific user terminating information transmitted in clusters. The receiver includes, *inter alia*, an antenna (Specification p. 12, line 19 to p. 13, line 11; and Fig. 1, element 110); a demodulator (Specification p. 12, line 19 to p. 13, line 11; and Fig. 1, element 130); and a digital signal processing unit(Specification p. 12, line 19 to p. 13, line 11; and Fig. 1, element 140), the digital signal processing unit including an information transfer

routine arranged to extract a flow of specific user terminating information from the received continuous flow of information, wherein the digital signal processing unit is configured to: predict an interruption in the form of a natural break in the transmitted flow of specific user terminating information, based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster of specific user terminating information is part of the specific user terminating information (Specification p. 11 line 20 to p. 12, line 2; p. 17, line 23 to p. 18, line 24; and Fig. 3); evaluate if the predicted interruption will be of an adequate length of time; change the reception frequency of the receiver from the first reception frequency to an alternative reception frequency if the interruption is of an adequate length of time (Specification p. 17, line 23 to p. 18, line 24; and Fig. 3); test receive the alternative reception frequency(Specification p. 19, lines 1-14; and Fig. 3); and enable reception and extraction of the flow of specific user terminating information (Specification p. 6, lines 14-19 and Fig. 3).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,671,219 to Jensen et al. ("Jensen").

VII. ARGUMENT

The Examiner fails to establish a *prima facie* case of obviousness because the cited prior art fails to teach or suggest each and every element recited in claims 1-37.

In order to support a rejection under 35 U.S.C. § 103, the Examiner must establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness three criteria must be met. First, there must be some rationale to combine the cited references. Second, there must be a reasonable expectation of success. Finally, the combination must teach each and every claimed element. In the present case, claims 1-37 are patentable over Jensen for at least the reason that Jensen fails to disclose each and every claimed element.

Independent claim 1

Nowhere in Jensen is there any disclosure or suggestion of a method of test receiving alternative reception frequencies as claimed. More specifically, Jensen fails to disclose or suggest (1) predicting an interruption in the form of a natural break in the transmitted flow of specific user terminating information based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster is part of the specific user terminating information; and (2) evaluating the interruption to determine whether it will be of an adequate length of time as recited in claim 1.

In rejecting claim 1, the Examiner asserts that Jensen discloses "predicting an interruption in the form of a natural break" as recited in claim 1 in as much as Jensen discloses monitoring packets of information retrieved by the receiver and switching to available channels (stored in advance) upon interruption due to various natural interruptions of the current channel in use, such as low signal quality or severe signal blockage. Although, as pointed out by the Examiner, Jensen discloses monitoring received packets and switching or initiating a handoff when the received signal quality is below a predetermined threshold, the Examiner's conclusion/assertion that this handoff of Jensen is equivalent to "predicting an interruption in the form a natural break...based on an indication of the end of a cluster..." as claimed is unfounded.

First, while low signal quality, signal blockage, and/or signal interference may, *arguendo,* be considered natural breaks in the *received* signal flow, they are NOT natural breaks in the *transmitted* flow of specific user terminating information as claimed. It is commonly understood that the action of "transmitting" (in the context of radio communication) is performed by a "transmitter". A transmitter is further commonly understood to be an electronic device which, usually with the aid of an antenna, propagates an electromagnetic signal such as radio, television, or other telecommunications. A transmitter usually comprises a power supply, an oscillator, a modulator, and amplifiers for radio frequency (RF). The modulator is the device which modulates the signal information onto the carrier frequency, which is then broadcast. Sometimes, also the antenna connected to the transmitter is consider to take part in the action of "transmitting" (c.f. the term "transmitting antenna"). It is quite clear that the act of "transmitting" is completed at the point where the signal leaves the antenna connected to the

transmitter. Thus the breaks referred to in Jensen, whether considered natural or not, are breaks in the *received* signal, not the *transmitted* signal as claimed.

Second, even if the interruptions of Jensen where considered to be part of the *transmitted* flow, nowhere in Jensen is there any disclosure or suggestion of predicting the interruptions based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster is *part of* the specific user terminating information as claimed. The Examiner asserts that the packets of Jensen are equivalent to the claimed cluster and the link quality dropping below a measurement threshold is equivalent to the claimed indication of the end. However even if the packets of Jensen where clusters, in the claimed invention the "indication of the end" is part of the "specific user terminating information" (i.e. is created by the transmitting side and carried as explicit information in the transmitted signal), whereas according to the Examiner's interpretation of Jensen the "indication of the end" corresponds to when "the overall link quality drops below a measured threshold". In the previous case the "indication of the end" consists of information intentionally transferred from a transmitting side to a receiving side. In the latter case it consists of circumstances during the signal transfer and reception that is not under control of the transmitting side and can not be consider to be "desired by" the receiver. Accordingly, the overall link quality is not part of the specific user terminating information as claimed.

Finally, nowhere in Jensen is there any disclosure or suggestion of evaluating the interruption to determine whether it will be of an adequate length of time. To the contrary, Jensen at best discloses that the interruptions result in a signal level below a predetermined threshold. Therefore, Jensen merely discloses evaluating the overall link quality, not the length of time of the interruption as claimed.

Accordingly claim 1 is patentable over Jensen for at least the reason that Jensen fails to disclose or suggest each and every claimed element.

Independent claim 30

Independent claim 30 defines a receiver including, *inter alia*, a digital signal processing unit configured to carry out the method of claim 1. Therefore, claim 30 is patentable over Jensen for a least those reasons presented above with respect to claim 1.

Claims 2-29 and 31-37

Claims 2-29 and 31-37 variously depend from independent claims 1 and 30. Therefore, claims 2-29 and 31-37 are patentable over Jensen for at least those reasons presented above with respect to claims 1 and 30.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

IX. EVIDENCE

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included

XI. CONCLUSION

For at least those reasons presented above, Appellant respectfully requests reversal of the Examiner's rejections of claims 1-37.

Dated: December 10, 2009

Respectfully submitted,

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/960,351

1. A method of test receiving alternative reception frequencies in a receiver receiving a continuous flow of information of a unidirectional digital broadcasting transmission at a first reception frequency, the continuous flow of information including specific user terminating information transmitted in clusters, the receiver including an information transfer routine that extracts a flow of specific user terminating information from the received continuous flow of information, the method comprising:

predicting an interruption in the form of a natural break in the transmitted flow of specific user terminating information, based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster of specific user terminating information is part of the specific user terminating information;

evaluating the interruption to determine whether it will be of an adequate length of time, and generating a positive response if it is evaluated that the interruption will be of an adequate length of time;

changing the reception frequency of the receiver from the first reception frequency to an alternative reception frequency if the evaluation has generated a positive response;

test receiving the alternative reception frequency;

enabling reception and extraction of the flow of specific user terminating information.

2. The method according to claim 1, wherein the continuous flow of information is a terrestrial digital video broadcasting (DVB T) transmission.

3. The method according to claim 1, wherein the continuous flow of information is a digital audio broadcasting (DAB) transmission.

4. The method according to any one of claims 1 to 3, wherein evaluating the interruption comprises:

determining a probability that the interruption will be of an adequate length of time;

determining if the probability is larger than a predetermined threshold value; and

if it is determined that the probability is larger than the predetermined threshold value then it is evaluated that the interruption will be of an adequate length of time.

5. The method according to claim 1, wherein an adequate length of time of an interruption is at least equal a total time required for one test reception and one frequency change.

6. The method according to claim 1, wherein predicting an interruption in the flow of specific user information comprises:

predicting an expected interruption in the flow of specific user information received in the receiver.

7. The method according to claim 1, wherein predicting an interruption in the flow of specific user information comprises:

receiving an indication by the information transfer routine.

8. The method according to claim 1, wherein predicting an interruption in the flow of specific user information comprises:

determining that an interruption in the flow of specific user information has occurred after a predetermined period of inactivity in the flow of specific user information.

9. The method according to claim 1, wherein predicting an interruption in the flow of specific user information comprises:

determining that an interruption in the flow of specific user information has occurred after a timeout signal is generated by the information transfer routine.

10. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed after the step of test receiving the alternative reception frequency has completed.

11. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed after a predetermined time interval from the point in time of the step of changing the reception frequency from the first reception frequency to an alternative frequency.

12. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed after a predicted available time period.

13. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed after the information transfer routine has requested more information.

14. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed a predetermined period of time after the information transfer routine has requested more information.

15. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed after the information transfer routine is activated.

16. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information is performed a predetermined period of time after the information transfer routine is activated.

17. The method according to claim 1, further comprising:
determining a list of alternative frequencies.

18. The method according to claim 17, wherein after the step of test receiving the alternative reception frequency the method further comprises:
changing the reception frequency of the receiver from an alternative reception frequency to a further alternative frequency from the list of alternative frequencies; and
test receiving the further alternative frequency.

19. The method according to claim 18, wherein changing the reception frequency of the receiver from an alternative reception frequency to a further alternative frequency from the list of determined alternative frequencies, and test receiving the further alternative frequency are repeated by changing to alternative frequencies from the list of determined alternative frequencies.

20. The method according to claim 18, wherein changing reception frequency of the receiver from an alternative reception frequency to a further alternative frequency from the list of determined alternative frequencies, and test receiving the further alternative frequency are repeated by changing to alternative frequencies from the list of determined alternative frequencies, until all the frequencies from the list of determined alternative frequencies are test received.

21. The method according to claim 1, further comprising:
evaluating the test reception or test receptions based on one or more parameters of the test received alternative frequency or frequencies.

22. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information comprises:
changing the reception frequency to the first reception frequency.

23. The method according to claim 1, further comprising:
initiating a handover to an alternative frequency.

24. The method according to claim 23, wherein initiating a handover comprises:
determining a handover frequency to which frequency the reception should be changed; and
changing the reception frequency of the receiver to the handover frequency.

25. The method according to claim 24, wherein initiating a handover further comprises:
determining a further interruption in the flow of specific user terminating information;
evaluating the further interruption to determine whether it will be of an adequate length of time, and generating a positive response if it is evaluated that the further interruption will be of an adequate length of time; and
wherein changing the reception frequency to the handover frequency only occurs if the evaluation of the further interruption has generated a positive response.

26. The method according to claim 25, wherein evaluating the further interruption comprises:
determining a probability that the further interruption will be of an adequate length of time;
determining if the probability is larger than a predetermined threshold value; and
if it is determined that the probability is larger than the predetermined threshold value then it is evaluated that the further interruption will be of an adequate length of time.

27. The method according to claim 26, wherein an adequate length of time for the further interruption is at least equal a total time of one frequency change.

28. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information comprises:

changing the reception frequency to one alternative reception frequency; and

initiating a handover from the first reception frequency to the alternative reception frequency in question.

29. The method according to claim 1, wherein enabling reception and extraction of the flow of specific user terminating information comprises:

initiating a handover from the first reception frequency to the alternative reception frequency that was test received most recently.

30. A receiver configured to receive a continuous flow of information of a unidirectional digital broadcasting transmission at a first reception frequency, the continuous flow of information including specific user terminating information transmitted in clusters, the receiver comprising:

an antenna;

a demodulator; and

a digital signal processing unit, the digital signal processing unit including an information transfer routine arranged to extract a flow of specific user terminating information from the received continuous flow of information, wherein the digital signal processing unit is configured to:

predict an interruption in the form of a natural break in the transmitted flow of specific user terminating information, based on an indication of the end of a cluster of the specific user terminating information, where the indication of the end of the cluster of specific user terminating information is part of the specific user terminating information;;

evaluate if the predicted interruption will be of an adequate length of time;

change the reception frequency of the receiver from the first reception frequency to an alternative reception frequency if the interruption is of an adequate length of time;

test receive the alternative reception frequency; and

enable reception and extraction of the flow of specific user terminating information.

31. The receiver according to claim 30, wherein the continuous flow of information is a terrestrial digital video broadcasting (DVB T) transmission.

32. The receiver according to claim 30, wherein the continuous flow of information is a digital audio broadcasting (DAB) transmission.

33. The receiver according to any one of claims 30 to 32, wherein the digital signal processing unit is further configured to:

determine a probability that the interruption will be of an adequate length of time;

determine if the probability is larger than a predetermined threshold value; and

if it is determined that the probability is larger than a predetermined threshold value then it is evaluated that the interruption will be of an adequate length of time.

34. The receiver according to claim 30, wherein an adequate length of time for an interruption is at least equal a total time of one test reception and two frequency changes.

35. The receiver according to claim 30, wherein the digital signal processing unit is further configured to:

change the reception frequency to the first reception frequency.

36. The receiver according to claim 30, wherein the digital signal processing unit is further configured to:

initiate a handover from the first reception frequency to an alternative frequency.

37. The receiver according to claim 30, wherein the digital signal processing unit is further configured to:

initiate a handover from the first reception frequency to the alternative reception frequency that was test received most recently.

APPENDIX B

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

APPENDIX C

No related proceedings are referenced in II. above, hence copies of decisions in related proceedings are not provided.